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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,166

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Atsujiro Ishii

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EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT

PAPER NUMBER

2873

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/759,166

Applicant(s)

ISHII ET AL.

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-21 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/142,219.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/05, 1/04</u> | 6) <input checked="" type="checkbox"/> Other: <u>Foreign Reference</u> . |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/142,219, filed on May 10, 2002.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claims 6, 8, 9, are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Specifically, independent claim 1 is claiming that the second lens group, fourth lens group and fifth lens group each comprise "a refracting curved surface". Therefore each of these groups must inherently comprise at least one lens i.e. "include one lens component". Therefore, claiming that the second, fourth or fifth lens group each "includes one lens component" does not further limit independent claim 1.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-10, 12, 15-16, 18, 20-21 are rejected under 35

U.S.C. 102(e) as being anticipated by Sugawara patent number 6,414,791

(Sugawara).

Sugawara reads on these claims by disclosing the limitations therein including the following: an electronic image pickup system (column 2, lines 25-40); comprising an optical path bending system (Figures 1 and 5, column 6, lines 52-58, column 7, line 28 to column 8, line 50 in which the embodiment of Figure 5 is disclosed as having the mirrors and prism similar to Figure 1 but just not shown in Figure 5); comprising a first lens group fixed for zooming (Figures 1 and 5, "SR", "MR", "1GR", and "P" together as the first fixed lens group); a second lens group with a refracting curved surface which moves for zooming so that a space between the first and second group varies (Figure 5, "2G" as the second lens group and as per Figure 5, moving for zooming); a third lens group with a refracting curved surface and a variable spacing between the second and third groups (Figure 5, "3G" as the third lens group); a fourth lens group with a

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refracting curved surface and a variable spacing between the third and fourth groups (Figure 5, "4G" as the fourth lens group); a fifth lens group with a refracting curved surface and a variable spacing between the fourth and fifth groups (Figure 5, "5G" as the fifth lens group); the first lens group comprising at least one reflecting element for bending the optical path (Figures 1 and 5, the prism "P" as the reflecting optical element); an electronic image pickup device on the image side of the optical system (column 2, lines 26-40); the reflecting optical element as a reflecting prism (Figures 1 and 5, "P", column 6, lines 17-22); the first lens group comprising a negative lens component (Figure 5, the negative lens of "1G"); a reflecting optical element (Figures 1 and 5, "P"); and a positive lens component (Figure 5, the positive lens of "1G"); the second lens group including one lens component (Figure 5, "2G"); the third lens group including two lens components (Figure 5, "3G"); the fourth lens group including one lens component (Figure 5, "4G"); the fifth lens group including one lens component (Figure 5, "5G"); the first lens group having negative power (Figures 1 and 5, embodiments 1 and 4, "SR", "MR", "1GR", and "P" together having negative power); the third lens group having positive power (Figure 5, Embodiment 4, "3G" of positive power); the third and fourth groups moving for zooming (Figure 5, "3G" and "4G"); a low pass filter between the fifth lens group and the image pickup device (Figure 1, "LPF"); the system comprising a reflecting element and seven components (Figures 1 and 5); including at least one cemented lens of a positive and negative lens (Figure 5, "5G").

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Claims 1, 5-9, 11-17, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Hagimori et al publication number 2001/0046383 (Hagimori).

Hagimori reads on these claims by disclosing the limitations therein including the following: an electronic image pickup system (paragraphs 0002, 0043-0044); comprising an optical path bending system (paragraph 0078); comprising a first lens group fixed for zooming (see Figures 2-9 and corresponding embodiments such as Figure 2 and paragraph 0078 in which the first lens group can be kept fixed in any embodiment with a mirror for bending the path between the first and second groups and the first group being considered as the fixed lenses of GR1 together with the mirror); a second lens group with a refracting curved surface which moves for zooming so that a space between the first and second group varies (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR2"); a third lens group with a refracting curved surface and a variable spacing between the second and third groups (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR3"); a fourth lens group with a refracting curved surface and a variable spacing between the third and fourth groups (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR4"); a fifth lens group with a refracting curved surface and a variable spacing between the fourth and fifth groups (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR5"); the first lens group comprising at least one reflecting element for bending the optical path (paragraph 0078 with the fixed lenses of the first group and the mirror together as the "first lens group"); an electronic image pickup device on the image side of the optical system

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(paragraphs 0002, 0043-0044); the first lens group comprising a negative lens component, a reflecting optical element, and a positive lens component (see Figures 2-9 and corresponding embodiments such as Figure 2, and paragraph 0078); the second lens group including one lens component (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR2"); the third lens group including two lens components (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR3"); the fourth lens group including one lens component (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR4"); the fifth lens group including one lens component (see Figures 2-9 and corresponding embodiments such as Figure 2, "GR5"); the second lens group having positive power (see paragraph 0049, Figures 2-9 and corresponding embodiments such as Figure 5, "GR3" as the "second lens group"); the third lens group having positive power (see paragraph 0049, Figures 2-9 and corresponding embodiments such as Figure 2, "GR3" as the "third lens group"); the fourth lens group having negative power (see paragraph 0049, Figures 2-9 and corresponding embodiments such as Figure 2, "GR4" as the "fourth lens group"); the fifth lens group having positive power (see paragraph 0049, Figures 2-9 and corresponding embodiments such as Figure 2, "GR5" as the "fifth lens group"); the third and fourth groups moving for zooming (Figures 2-9 and corresponding embodiments such as Figure 2, "GR3" and "GR4" moving for zooming); the fifth lens group fixed for zooming (Figures 2-9 and corresponding embodiments such as Figure 2, "GR5" fixed for zooming); the first to fifth lens groups comprising three lens groups having positive power and two lens groups

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having negative power (see paragraph 0049 and Figures 2-9 and corresponding embodiments such as Figure 2); the system comprising a reflecting element and seven components (Figures 2-9 and corresponding embodiments such as Figure 2 and paragraph 0078 re the reflecting member); including at least one cemented lens of a positive and negative lens (Figures 2-9 and corresponding embodiments such as Figure 2, "GR3").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara.

Sugawara discloses as is set forth above, however, the Figure 5 embodiment, which is the embodiment that discloses the second lens group moving for zooming, does not specifically disclose the fifth lens group as positive, fixed for zooming, and the system comprising three positive lens groups and two negative lens groups. However, the Figure 1 embodiment teaches that in an electronic image pickup system of similar structure and which uses a light bending optical element in the first lens group similar to that of Figure 5 (Figure 1); that the fifth lens group can have a positive power, can be fixed for zooming, and the entire system can have two negative lens groups and three positive lens

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groups for the purpose of providing an electronic image pickup system of good optical performance and decreased color irregularity color (Figure 1, embodiment 1, column 2, lines 25-40). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Figure 5 embodiment as having a fifth lens group of positive power, fixed for zooming, and the system having a total of two negative lens groups and three positive lens groups since the Figure 1 embodiment teaches of such features in a lens system of similar structure for the purpose of providing a lens system with good optical performance and decreased color irregularity color.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagimori in view of Nakamura et al patent number 6,104,432 (Nakamura).

Hagimori discloses as is set forth above including disclosing a reflecting element in the form of a mirror for bending the light path (paragraph 0078) but does not specifically disclose the light path bending element as a reflecting prism. Nakamura teaches that in an electronic image pickup system which utilizes an optical path bending element in the first lens group, that such an element can be in the form of either a prism or mirror for the purpose of bending the optical path to make the optical system more compact (column 1, lines 8-14, column 3, lines 13-19, Figure 9A). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the optical path bending element of Hagimori in the form of a reflecting prism since Nakamura et al teaches that in an electronic image pickup system which utilizes an optical path bending element in the first lens group, that such an element can

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be in the form of either a prism or mirror for the purpose of bending the optical path and making the optical system more compact.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagimori in view of Nakamura et al patent number 6,104,432 (Nakamura).

Hagimori discloses as is set forth but does not specifically disclose the use of a low pass filter between the most image side lens group and the pickup device. Nakamura teaches that in an electronic image pickup system which utilizes an optical path bending element in the first lens group similar to that of Hagimori, that the system can further comprise a low pass filter between the most image side lens group and the pickup device for the purpose of providing an optical system of improved optical performance (column 1, line 5 to column 2, line 51, column 5, line 45, column 10, line 30). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have system of Hagimori as further comprising a low pass filter as claimed since Nakamura teaches that in an electronic image pickup system which utilizes an optical path bending element in the first lens group similar to that of Hagimori, that the system can further comprise a low pass filter between the most image side lens group and the pickup device for the purpose of providing an optical system of improved optical performance.

Allowable Subject Matter

Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claims 3-4, none of the prior art either alone or in combination, disclose or teach of the claimed electronic imaging pickup system specifically including, as the distinguishing feature in combination with the other limitations, the claimed first lens group comprising in order from the object side, a 1st subgroup that includes a reflecting optical element and has a negative refractive power and a 2nd lens subgroup that has a positive refracting power.

Prior Art Citations

Japanese document number 2001-100100 is being cited herein to show an electronic image pickup apparatus that together with a teaching reference concerning a reflecting optical element in the first lens group, would have read on or made obvious a number of the above rejected claims, however, such rejections would have been repetitive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:30 to 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached at (571) 272-2333. The fax

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phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Schwartz', is positioned above the printed name.

Jordan M. Schwartz
Primary Examiner
Art Unit 2873
February 1, 2007